

AMENDMENTS TO THE DRAWINGS

The attached replacement sheets for the sole figure is submitted for the Examiner's approval. The replacement sheet better illustrates the contour of basket 3.

Attachment: Replacement sheet

REMARKS

At the outset, Applicants acknowledge with appreciation Examiner Paul S. Hyun's courtesy in conducting the August 22, 2006 personal interview. During the interview, Applicant, Applicants' representative, Examiner Paul S. Hyun and SPE Yelena Gakh discussed proposed claim amendments and arguments that would overcome the rejection of claims 1-9 under 35 U.S.C. §§ 102 and 103.

Claims 1-10 are pending in this application. Claims 1-9 have been amended. New claim 10 has been added. The specification has been amended to correct typographical errors. No new matter has been added. Replacement sheet for FIG. 1 is submitted for the Examiner's approval. The replacement sheet better illustrates the contour of basket 3 of the claimed invention.

Claims 1-9 stand rejected under 35 U.S.C. § 112, first and second paragraphs. Claims 1-9 have been amended. Applicants submit that all pending claims are now in condition for allowance.

Claims 1, 2 and 6 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ravault (U.S. Patent No. 3,895,917). Reconsideration is respectfully requested.

The claimed invention relates to a "reactor for chemical processes involving catalytic reactions of gasses at high temperatures." As such, amended independent claim 1 recites a "reactor for chemical processes involving catalytic reactions of gasses at high temperatures" comprising "a reactor shell comprising an inlet and an outlet, the reactor shell being suitable for operation at elevated pressures" and "a metallic basket suitable for operation at elevated temperatures inside the reactor shell, the metallic basket having sidewalls insulated by a layer of insulation material which is provided between the sidewalls of the metallic basket and an inner wall of the reactor shell."

Amended independent claim 1 also recites that "the basket comprises an inlet channel and a fixed catalyst bed" and that "the inlet channel coincides with the inlet of the reactor shell."

Ravault does not anticipate the subject matter of claims 1, 2 and 6. Ravault teaches an "exhaust gas reactor" which is close to the engine and which contains an arrangement of baffles to allow the fluid stream to travel a long path. (Col. 1, ll. 19, 41-43). Ravault does not disclose, however, "a reactor shell" and "a metallic basket . . . having sidewalls insulated by a layer of insulation material which is provided between the sidewalls of the metallic basket and an inner wall of the reactor shell," as amended independent claim 1 recites. Ravault is also silent about a "basket" that "comprises an inlet channel and a fixed catalyst bed" and having an inlet channel that "coincides with the inlet of the reactor shell," as in the claimed invention. For at least these reasons, Ravault fails to anticipate the subject matter of claims 1, 2 and 6, and withdrawal of the rejection of these claims is respectfully requested.

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ravault in view of Mentschel (U.S. Patent No. 4,018,573). Reconsideration is respectfully requested.

The subject matter of claim 3 would not have been obvious over the cited prior art references, whether considered alone or in combination. Applicants submit that the August 3, 2006 Office Action fails to establish a *prima facie* case of obviousness. Courts have generally recognized that a showing of a *prima facie* case of obviousness necessitates three requirements: (i) some suggestion or motivation, either in the references themselves or in the knowledge of a person of ordinary skill in the art, to modify the reference or combine the reference teachings; (ii) a reasonable expectation of success; and (iii) the prior art references must teach or suggest all claim limitations. See

e.g., In re Dembiczak, 175 F.3d 994 (Fed. Cir. 1999); In re Rouffet, 149 F.3d 1350, 1355 (Fed. Cir. 1998); Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573 (Fed. Cir. 1996).

In the present case, Ravault and Mentschel, considered alone or in combination, fail to disclose, teach or suggest all limitations of amended independent claim 1. As noted above, Ravault is silent about a “metallic basket . . . having sidewalls insulated by a layer of insulation material which is provided between the sidewalls of the metallic basket and an inner wall of the reactor shell” and further having the characteristics recited in claim 1. Ravault teaches an “exhaust gas reactor” having a specific baffle arrangement, and not the limitations of the claimed invention.

Mentschel fails to supplement the deficiencies of Ravault. Mentschel teaches a heat exchange reactor and not a “reactor for chemical processes involving catalytic reactions of gasses at high temperatures” comprising “a metallic basket . . . having sidewalls insulated by a layer of insulation material which is provided between the sidewalls of the metallic basket and an inner wall of the reactor shell,” as in the claimed invention. Mentschel also does not disclose, teach or suggest that “the basket comprises an inlet channel and a fixed catalyst bed” or that “the inlet channel coincides with the inlet of the reactor shell,” as claim 1 recites. In fact, Mentschel teaches against the use of an insulation material between the reactor walls and the reactor shell. Mentschel specifically teaches that “[t]he space between the inner wall 2 and intermediate wall 10 is in communication with the reaction chamber 1 through apertures 14 in the cover 3” (col. 5, ll. 8-11) and, thus, Mentschel does not disclose, teach or suggest “a metallic basket . . . having sidewalls insulated by a layer of insulation material which is provided between the sidewalls of the metallic basket and an inner wall of the reactor shell,” as in the claimed invention. For at least these reasons, the

Office Action fails to establish a *prima facie* case of obviousness, and withdrawal of the rejection of claim 3 is respectfully requested.

Claims 4 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ravault in view of Mentschel and further in view of Deshpande (U.S. Pat. Appl. Pub. No. 2002/0090326). Reconsideration is respectfully requested.

The subject matter of claims 4 and 5 would not have been obvious over the cited prior art references, whether considered alone or in combination. None of Ravault, Mentschel and Deshpande discloses, teaches or suggests all limitations of amended independent claim 1. As noted, Ravault and Mentschel fail to disclose all limitations of claim 1. Deshpande teaches a spiral heat exchanger with no insulation material and, thus, Deshpande also fails to disclose, teach or suggest a "reactor for chemical processes involving catalytic reactions of gasses at high temperatures" comprising "a metallic basket . . . having sidewalls insulated by a layer of insulation material which is provided between the sidewalls of the metallic basket and an inner wall of the reactor shell," as claim 1 recites. For at least these reasons, the Office Action fails to establish a *prima facie* case of obviousness, and withdrawal of the rejection of claims 4 and 5 is also respectfully requested.


Application No. 10/700,522
Reply to Office Action of August 3, 2006

Docket No.: H0610.0355/P355

Allowance of all pending claims is solicited.

Dated: August 24, 2006

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